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NEWS 17 Apr 22 BIOSIS Gene Names now available in TOXCENTER
NEWS 18 Apr 22 Federal Research in Progress (FEDRIP) now available

NEWS EXPRESS February 1 CURRENT WINDOWS VERSION IS V6.0d, CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP), AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002
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=> s multipotent (p) stem (p) cell (p) peripheral (p) neural

3 FILES SEARCHED...

L1 60 MULTIPOTENT (P) STEM (P) CELL (P) PERIPHERAL (P) NEURAL

=> dup rem l1

PROCESSING COMPLETED FOR L1

L2 26 DUP REM L1 (34 DUPLICATES REMOVED)

=> d l2 total ibib kwic

L2 ANSWER 1 OF 26 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:105754 CAPLUS

TITLE: **Multipotent neural stem cells from peripheral tissues and uses thereof**

INVENTOR(S): Toma, Jean; Akhavan, Mahnaz; Fernandes, Karl J. L.;

Fortier, Mathieu; Miller, Freda
PATENT ASSIGNEE(S): Can.

SOURCE: U.S. Pat. Appl. Publ., Cont.-in-part of Ser. No. US 2000-670049, filed on 25 Sep 2000 which is a contin
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002016002	A1	20020207	US 2001-916639	20010726
WO 2001053461	A1	20010726	WO 2001-CA47	20010124
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			

PRIORITY APPLN. INFO.:

US 2000-490422 A2 20000124
US 2000-670099 A2 20000925
WO 2001-CA47 A2 20010124

TI **Multipotent neural stem cells** from
peripheral tissues and uses thereof
AB This invention relates to **multipotent neural
stem cells**, purified from the **peripheral
nervous system** of mammals, capable of differentiating into **neural
and non-neural cell types**. These **stem
cells** provide an accessible source for autologous transplantation
into CNS, PNS, and other damaged tissues.

L2 ANSWER 2 OF 26 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 2002170969 IN-PROCESS
DOCUMENT NUMBER: 21899365 PubMed ID: 11902683
TITLE: Cell-intrinsic and cell-extrinsic cues regulating lineage
decisions in multipotent neural crest-derived progenitor
cells.
AUTHOR: Paratore Christian; Hagedorn Lilian; Floris Julien; Hari
Lisette; Kleber Maurice; Suter Ueli; Sommer Lukas
CORPORATE SOURCE: Institute of Cell Biology, Swiss Federal Institute of
Technology, ETH-Honggerberg, Zurich.
SOURCE: INTERNATIONAL JOURNAL OF DEVELOPMENTAL BIOLOGY, (2002 Jan)
46 (1) 193-200.
Journal code: 8917470. ISSN: 0214-6282.
PUB. COUNTRY: Spain
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 20020321
Last Updated on STN: 20020321

AB **Multipotent stem cells** must generate various
differentiated **cell** types in correct number and sequence during
neural development. In the **peripheral** nervous system
(PNS), this involves the formation of postmigratory progenitor
cell types which maintain multipotency and are able to give rise
to **neural** and non-**neural cells** in response
to instructive growth factors. We propose that fate restrictions in such
progenitor **cells** are controlled by the combinatorial interaction
of different extracellular signals, including community effects in
response to both neurogenic and gliogenic factors. In addition, distinct
progenitor **cell** types display intrinsic differences which
modulate their response to the extracellular environment. Thus, a
progenitor **cell** is apparently able to integrate multiple
intrinsic and extrinsic cues and thereby to choose fates appropriate for
its location. Fate analysis of genetically modified progenitor
cells will help to identify the molecules involved. This approach
appears promising given the identification of **multipotent**
progenitor **cells** from the mouse PNS and the availability of
genetics in the mouse system.

L2 ANSWER 3 OF 26 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:545835 CAPLUS
DOCUMENT NUMBER: 135:119253
TITLE: **Multipotent neural stem
cells** from **peripheral** tissues and
uses thereof
INVENTOR(S): Toma, Jean; Akhavan, Mahnaz; Fernandes, Karl J. L.;
Fortier, Mathieu; Miller, Freda; Golster, Andrew
PATENT ASSIGNEE(S): McGill University, Can.
SOURCE: PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001053461	A1	20010726	WO 2001-CA47	20010124
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002016002	A1	20020207	US 2001-916639	20010726
PRIORITY APPLN. INFO.:			US 2000-490422	A 20000124
			US 2000-670049	A 20000925
			WO 2001-CA47	A2 20010124
TI	Multipotent neural stem cells from peripheral tissues and uses thereof			
AB	This invention relates to multipotent neural stem cells , purified from the peripheral nervous system of mammals, capable of differentiating into neural and non-neural cell types. These stem cells provide an accessible source for autologous transplantation into CNS, PNS, and other damaged tissues. Multipotent neural stem cells were purified from mouse olfactory epithelium. Greater than 95% of the cells expressed nestin, a marker for stem cells and neural stem cells .			
ST	multipotent neural stem cell peripheral tissue; transplantation multipotent neural stem cell differentiation; nestin multipotent neural stem cell			
IT	Adipose tissue (adipocyte, differentiation into; multipotent neural stem cells from peripheral tissues and uses thereof)			
IT	Proteins, specific or class RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses) (cell fate-detg.; multipotent neural stem cells from peripheral tissues and uses thereof)			
IT	Injury (cells for transplantation and repair of; multipotent neural stem cells from peripheral tissues and uses thereof)			
IT	Nervous system (central; multipotent neural stem cells from peripheral tissues and uses thereof)			
IT	Skin (dermis; multipotent neural stem cells from peripheral tissues and uses thereof)			
IT	Heart Pancreatic islet of Langerhans (differentiation into cells of; multipotent neural stem cells from peripheral tissues and uses thereof)			
IT	Astrocyte Neuroglia Oligodendrocyte Schwann cell (differentiation into; multipotent neural stem cells from peripheral tissues and uses thereof)			

IT Nervous system
 (dopamine, **multipotent stem cells**
 capable of differentiating into neurons of; **multipotent
 neural stem cells** from **peripheral**
 tissues and uses thereof)

IT Blood serum
 (fetal bovine; **multipotent neural stem
 cells** from **peripheral** tissues and uses thereof)

IT Gene
 RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU
 (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological
 study); PREP (Preparation); PROC (Process); USES (Uses)
 (heterologous, in **multipotent stem cell**;
multipotent neural stem cells
 from **peripheral** tissues and uses thereof)

IT Development, mammalian postnatal
 (juvenile; **multipotent neural stem
 cells** from **peripheral** tissues and uses thereof)

IT Tongue
 (**multipotent neural stem cells**
 from mouse; **multipotent neural stem
 cells** from **peripheral** tissues and uses thereof)

IT Aging, animal
 Animal tissue culture
 Cell differentiation
 Development, mammalian postnatal
 Drug delivery systems
 Gene therapy
 Mammal (Mammalia)
 Skin
 Transformation, genetic
 Transplant and Transplantation
 (**multipotent neural stem cells**
 from **peripheral** tissues and uses thereof)

IT Sensory receptors
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
 BIOL (Biological study); OCCU (Occurrence)
 (**multipotent neural stem cells**
 purifn. from tissues contg.; **multipotent neural
 stem cells** from **peripheral** tissues and uses
 thereof)

IT Brain
 (**multipotent neural stem cells**
 transplantation into; **multipotent neural
 stem cells** from **peripheral** tissues and uses
 thereof)

IT Fibronectins
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
 BIOL (Biological study); OCCU (Occurrence)
 (**multipotent stem cell** expressing;
multipotent neural stem cells
 from **peripheral** tissues and uses thereof)

IT Proteins, specific or class
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);
 BIOL (Biological study); OCCU (Occurrence)
 (nestins, **multipotent stem cell**
 expressing; **multipotent neural stem
 cells** from **peripheral** tissues and uses thereof)

IT Transplant and Transplantation
 (**neural; multipotent neural stem
 cells** from **peripheral** tissues and uses thereof)

IT Nerve
 (neuron, differentiation into; **multipotent neural
 stem cells** from **peripheral** tissues and uses
 thereof)

IT Nose

(olfactory epithelium, **multipotent neural stem cells** from mouse; **multipotent neural stem cells** from **peripheral tissues** and uses thereof)

IT Animal tissue
(**peripheral; multipotent neural stem cells** from **peripheral tissues** and uses thereof)

IT Muscle
(smooth, differentiation into cell of; **multipotent neural stem cells** from **peripheral tissues** and uses thereof)

IT Cell
(**stem; multipotent neural stem cells** from **peripheral tissues** and uses thereof)

IT Proteins, specific or class
RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(therapeutic; **multipotent neural stem cells** from **peripheral tissues** and uses thereof)

IT Nerve
(transplant; **multipotent neural stem cells** from **peripheral tissues** and uses thereof)

IT Nose
(vomeronasal organ, **multipotent neural stem cells** from mouse and rat; **multipotent neural stem cells** from **peripheral tissues** and uses thereof)

IT 62031-54-3, FGF 62229-50-9, EGF
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**multipotent neural stem cells** from **peripheral tissues** and uses thereof)

IT 51-61-6, Dopamine, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**multipotent stem cells** differentiating into neurons expressing; **multipotent neural stem cells** from **peripheral tissues** and uses thereof)

IT 152121-47-6, SB203580 154447-36-6, LY294002 167869-21-8, PD098059
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(skin-derived **multipotent neural stem cells** response to; **multipotent neural stem cells** from **peripheral tissues** and uses thereof)

L2 ANSWER 4 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 ACCESSION NUMBER: 2001:574390 BIOSIS
 DOCUMENT NUMBER: PREV200100574390
 TITLE: Neural precursor cells in the peripheral nervous system.
 AUTHOR(S): Gray, R. A. (1); Han, Y.; Bell, T.; Magnuson, D. S. K. (1)
 CORPORATE SOURCE: (1) Dept Anatomical Sci and Neurobiol, Univ Louisville, Louisville, KY USA
 SOURCE: Society for Neuroscience Abstracts, (2001) Vol. 27, No. 2, pp. 2045. print.
 Meeting Info.: 31st Annual Meeting of the Society for Neuroscience San Diego, California, USA November 10-15, 2001
 ISSN: 0190-5295.
 DOCUMENT TYPE: Conference
 LANGUAGE: English
 SUMMARY LANGUAGE: English

AB **Multipotent neural stem cells** hold promise for repair of degenerative and traumatic injuries of the central nervous system. Can **stem cells** be isolated from tissue of the **peripheral** nervous system such as the dorsal root ganglia (DRG)? Embryologically, DRG **cells** are of **neural** crest origin while those in the brain and spinal cord are of neuroepithelial origin. We tested the hypothesis that there are **neural stem cells** in the DRGs of the neonatal rat. Rats four to seven days of age were used in the experiments. DRG **cells** were dissected, dissociated and cultured in the presence of the mitogens EGF and FGF2. "Neurospheres" grew in both primary and secondary (passaged) cultures. The cultured **cells** continued to divide in the presence of the mitogens following two passages, and when placed in mitogen free, serum containing media, differentiated into Map2a,b positive, GFAP positive and Rip positive **cells**. The differentiated **cells** had appropriate neuronal, astrocytic and oligodendroglial morphologies. Differentiated cultures also contained substantial numbers of nestin positive **cells**. As suggested by the previous work of Namaka and Hochman, we conclude that there are **neural precursor cells** in neonatal rat DRGs that possess the capability to proliferate and differentiate into **cells** of neuronal and glial lineages, at least under in vitro conditions. The physiological properties and potential applications of these **cells** in repairing the injured spinal cord are currently under investigation.

L2 ANSWER 5 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

ACCESSION NUMBER: 2002:151856 BIOSIS

DOCUMENT NUMBER: PREV200200151856

TITLE: Prospective identification, enrichment and characterization

of retinal neural stem cells by flow cytometry.

AUTHOR(S): Ahmad, Iqbal (1); Jackson, John D.; Bhattacharya, Sumitra (1)

CORPORATE SOURCE: (1) Ophthalmology, University of Nebraska Medical Center, Omaha, NE USA

SOURCE: Blood, (November 16, 2001) Vol. 98, No. 11 Part 2, pp. 122b. <http://www.bloodjournal.org/>. print. Meeting Info.: 43rd Annual Meeting of the American Society of Hematology, Part 2 Orlando, Florida, USA December

07-11,

2001

ISSN: 0006-4971.

DOCUMENT TYPE: Conference

LANGUAGE: English

AB **Neural stem cells** (NSC) have the potential

to shed light on brain development and to replace and/or rescue damaged neurons or glia. However, like hematopoietic **stem cells** (HSC) that can be prospectively identified and enriched, the majority of NSC have not been isolated directly from fresh tissues. . . . potential barriers towards understanding their biology and therapeutic usage. To overcome these barriers we have begun prospective identification of retinal **stem cells** based on a strategy developed for the isolation of HSC. There are currently two different approaches for prospective identification of HSC. The first approach includes fluorescence activated cell sorting (FACS) using monoclonal antibodies to cell surface markers. This approach has been successfully used for prospective isolation of NSC from the **peripheral** nervous system using p75 receptor (Morrison et al, 1999, *Cell* 96: 732) and from human fetal brain using CD133 (Uchida et al, 2000, *PNAS* 97: 14720). Another approach is based. . . .

on

the ability of HSC to selectively exclude Hoechst dye, which leads to their identification as the "side population" (SP) **cells** by FACS. This approach has been used to enrich NSC from neurospheric culture (Hulopus and Quesenberry, 2000, *Cytometry* 40: 245). We have used the Hoechst dye exclusion approach to prospectively identify NSC from fresh

embryonic retina. These **cells**, identified as SP, constitute less than 0.01% of total **cells** and their staining with the Hoechst dye are verapamil sensitive. These retinal SP **cells** are proliferative and express neuroectodermal marker, nestin, and retinal progenitor markers; Chx10 and Rx. The retinal SP **cells** are **multipotent** and give rise to neurons and glia in differentiation conditions. Similar SP **cells** can be isolated and enriched from neurospheric culture. In such case, the enrichment is more than 100 folds.

These **cells**, when cultured in high density, give rise to secondary clones which are **multipotent** as **cells** in the primary clones. Taken together, our results suggest that Hoechst dye based

FACS constitute a practical approach for the. . .

L2 ANSWER 6 OF 26 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 2000306665 MEDLINE
DOCUMENT NUMBER: 20306665 PubMed ID: 10850492
TITLE: Transient Notch activation initiates an irreversible switch
from neurogenesis to gliogenesis by neural crest stem cells.
AUTHOR: Morrison S J; Perez S E; Qiao Z; Verdi J M; Hicks C; Weinmaster G; Anderson D J
CORPORATE SOURCE: Department of Internal Medicine, University of Michigan, Ann Arbor 48109, USA.
CONTRACT NUMBER: RO1 NS23476 (NINDS)
SOURCE: CELL, (2000 May 26) 101 (5) 499-510.
Journal code: CQ4; 0413066. ISSN: 0092-8674.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200007
ENTRY DATE: Entered STN: 20000720
Last Updated on STN: 20000720
Entered Medline: 20000713

AB The genesis of vertebrate **peripheral** ganglia poses the problem of how **multipotent neural crest stem cells** (NCSCs) can sequentially generate neurons and then glia in a local environment containing strong instructive neurogenic factors, such as BMP2.. . . in NCSCs in a manner that is completely dominant to

BMP2. Contrary to expectation, Notch activation did not maintain these **stem cells** in an uncommitted state or promote their self-renewal. Rather, even a transient activation of Notch was sufficient to cause a. . . accompanied by accelerated glial differentiation.

These data suggest that Notch ligands expressed by neuroblasts may act positively to instruct a **cell-heritable** switch to gliogenesis in neighboring **stem cells**.

L2 ANSWER 7 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2000:445901 BIOSIS
DOCUMENT NUMBER: PREV200000445901
TITLE: Up a Notch: Instructing gliogenesis.
AUTHOR(S): Wang, Songli (1); Barres, Ben A.
CORPORATE SOURCE: (1) Department of Neurobiology, Stanford University School of Medicine, Stanford, CA, 94305 USA
SOURCE: Neuron, (August, 2000) Vol. 27, No. 2, pp. 197-200.
print.
ISSN: 0896-6273.
DOCUMENT TYPE: General Review
LANGUAGE: English
SUMMARY LANGUAGE: English
IT Major Concepts

Cell Biology; Nervous System (Neural Coordination)
 IT Parts, Structures, & Systems of Organisms
 Schwann **cells**: nervous system; brain: function, nervous
 system; glia: nervous system; **neural crest stem**
cells: nervous system; **neural stem**
cells: **multipotent**, nervous system; neuron: nervous
 system; **peripheral** nervous system: nervous system
 IT Chemicals & Biochemicals
 Notch: protein, signaling

L2 ANSWER 8 OF 26 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1999:595378 CAPLUS

DOCUMENT NUMBER: 131:210090

TITLE: Protein and cDNA sequences for a human fibroblast
 growth factor (FGF 98), and uses thereof in the
 diagnosis and treatment of degenerative diseases

INVENTOR(S): Cen, Hui; Garcia, Pablo D.; Grieshammer, Uta; Kassam,
 Altaf; Lee, Pauline P.; Pot, David; Gospodarowicz,
 Denis; Martin, Kathleen

PATENT ASSIGNEE(S): Chiron Corporation, USA

SOURCE: PCT Int. Appl., 60 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9946381	A2	19990916	WO 1999-US5235	19990309
WO 9946381	A3	19991104		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9930760	A1	19990927	AU 1999-30760	19990309
EP 1062339	A2	20001227	EP 1999-912374	19990309
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRIORITY APPLN. INFO.:			US 1998-77411P	P 19980309
			US 1998-83553P	P 19980429
			US 1999-264851	A 19990308
			WO 1999-US5235	W 19990309

AB This invention provides protein and cDNA sequences for a newly identified human protein, designated FGF 98, which is a member of the fibroblast growth factor (FGF) family. In a preferred embodiment, primary central (CNS) and **peripheral** nervous system (PNS) **cells**, when treated with FGF 98 of the invention, proliferate, have at least a limited self regeneration capacity, and can undergo lineage restriction in response to the local environment. Although FGF 98 has been described on the basis of its ability to promote the survival of neuronal **cell** types, this factor will act on other neuronal **cell** types as well. The invention provides methods of using FGF 98 for the isolation, regeneration, proliferation, and differentiation of mammalian **multipotent neural stem cells**, progenitor **cells**, and progeny. In a further embodiment, **cells** produced by treatment with FGF 98 are used to screen drugs which may affect development, differentiation, survival, and/or function of CNS and PNS derived neurons and glia. The invention also includes therapeutic or pharmaceutical compns. comprising FGF 98 in a effect amt. for treating patients with degenerative diseases. In one embodiment, FGF

98 may be therapeutically administered by implanting into patients
vectors
or **cells** capable of producing a biol.-active form of FGF 98 or a
precursor of FGF 98.

L2 ANSWER 9 OF 26 MEDLINE DUPLICATE 3
ACCESSION NUMBER: 1999365269 MEDLINE
DOCUMENT NUMBER: 99365269 PubMed ID: 10433908
TITLE: P0 and PMP22 mark a multipotent neural crest-derived cell
type that displays community effects in response to
TGF-beta family factors.
AUTHOR: Hagedorn L; Suter U; Sommer L
CORPORATE SOURCE: Institute of Cell Biology, Swiss Federal Institute of
Technology, ETH-Honggerberg, CH-8093 Zurich, Switzerland.
SOURCE: DEVELOPMENT, (1999 Sep) 126 (17) 3781-94.
Journal code: ECW; 8701744. ISSN: 0950-1991.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199910
ENTRY DATE: Entered STN: 20000111
Last Updated on STN: 20000111
Entered Medline: 19991028

AB Protein zero (P0) and **peripheral** myelin protein 22 (PMP22) are
most prominently expressed by myelinating Schwann **cells** as
components of compact myelin of the **peripheral** nervous system
(PNS), and mutants affecting P0 and PMP22 show severe defects in
myelination. Recent expression studies suggest a role. . . not only in
myelination but also during embryonic development. Here we show that, in
dorsal root ganglia (DRG) and differentiated **neural** crest
cultures, P0 is expressed in the glial lineage whereas PMP22 is also
detectable in neurons. In addition, however, P0 and PMP22 are both
expressed in a **multipotent** cell type isolated from
early DRG. Like **neural** crest **stem cells**
(NCSCs), this P0/PMP22-positive **cell** gives rise to glia, neurons
and smooth-muscle-like **cells** in response to instructive
extracellular cues. In cultures of differentiating **neural** crest,
a similar **multipotent** cell type can be identified in
which expression of P0 and PMP22 precedes the appearance of **neural**
differentiation markers. Intriguingly, this P0/PMP22-positive progenitor
exhibits fate restrictions dependent on the cellular context in which it
is exposed to environmental signals. While single P0/PMP22-positive
progenitor **cells** can generate smooth muscle in response to
factors of the TGF-(beta) family, communities of P0/PMP22-positive
cells interpret TGF-(beta) factors differently and produce neurons
or undergo increased **cell** death instead of generating
smooth-muscle-like **cells**. Our data are consistent with a model
in which cellular association of postmigratory **multipotent**
progenitors might be involved in the suppression of a non-**neural**
fate in forming **peripheral** ganglia.

L2 ANSWER 10 OF 26 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 1999189758 MEDLINE
DOCUMENT NUMBER: 99189758 PubMed ID: 10089888
TITLE: Prospective identification, isolation by flow cytometry,
and in vivo self-renewal of multipotent mammalian neural
crest stem cells.
AUTHOR: Morrison S J; White P M; Zock C; Anderson D J
CORPORATE SOURCE: Division of Biology 216-76, California Institute of
Technology, Pasadena 91125, USA.
SOURCE: CELL, (1999 Mar 5) 96 (5) 737-49.
Journal code: CQ4; 0413066. ISSN: 0092-8674.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English

FILE SEGMENT: Priority Journals
ENTRY MONTH: 199904
ENTRY DATE: Entered STN: 19990504
Last Updated on STN: 20000303
Entered Medline: 19990422

AB **Multipotent and self-renewing neural stem cells** have been isolated in culture, but equivalent **cells** have not yet been prospectively identified in **neural** tissue. Using **cell** surface markers and flow cytometry, we have isolated **neural crest stem cells** (NCSCs) from mammalian fetal **peripheral** nerve. These **cells** are phenotypically and functionally indistinguishable from NCSCs previously isolated by culturing embryonic **neural** tube explants. Moreover, in vivo BrdU labeling indicates that these **stem cells** self-renew in vivo. NCSCs freshly isolated from nerve tissue can be directly transplanted in vivo, where they generate both neurons and glia. These data indicate that **neural stem cells** persist in **peripheral** nerve into late gestation by undergoing self-renewal. Such persistence may explain the origins of some PNS tumors in humans.

L2 ANSWER 11 OF 26 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 1999397953 MEDLINE
DOCUMENT NUMBER: 99397953 PubMed ID: 10467245
TITLE: Multipotent and restricted precursors in the central nervous system.
COMMENT: Comment in: Anat Rec. 2000 Aug 15;261(4):139-40
AUTHOR: Rao M S
CORPORATE SOURCE: Department of Neurobiology and Anatomy, University of Utah Medical School, Salt Lake City 84132, USA..
Mahendra.Rao@hsc.utah.edu
SOURCE: ANATOMICAL RECORD, (1999 Aug 15) 257 (4) 137-48. Ref: 52
Journal code: 0370540. ISSN: 0003-276X.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, ACADEMIC)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199910
ENTRY DATE: Entered STN: 19991026
Last Updated on STN: 20020317
Entered Medline: 19991012

AB Acquisition of **cell** type-specific properties in the nervous system is likely a process of sequential restriction in developmental potential. At least two classes of pluripotent **stem cells**, neuroepithelial (NEP) **stem cells** and EGF-dependent neurosphere **stem cells**, have been identified in distinct spatial and temporal domains. Pluripotent **stem cells** likely generate central nervous system (CNS) and **peripheral** nervous system (PNS) derivatives via the generation of intermediate lineage-restricted precursors that differ from each other and from **multipotent stem cells**.

Neuronal precursors termed neuronal-restricted precursors (NRPs), multiple classes of glial precursors termed glial-restricted precursors (GRPs), oligodendrocyte-type 2 astrocytes (O2As), astrocyte precursor **cells** (APCs), and PNS precursors termed **neural crest stem cells** (NCSCs) have been identified. **Multipotent stem cells** and restricted precursor **cells** can be isolated from embryonic **stem** (ES) **cell** cultures providing a non-fetal source of such **cells**. Analysis in multiple species illustrates similarities between rat, mouse, and human **cell** differentiation raising the possibility that similar factors and markers may be used to isolate precursor **cells** from human tissue or ES **cells**. Anat

L2 ANSWER 12 OF 26 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:745176 CAPLUS
DOCUMENT NUMBER: 129:341457
TITLE: Generation, characterization, and isolation of
neuroepithelial stem cells and lineage-restricted
intermediate precursor
INVENTOR(S): Rao, Mahendra S.; Mayer-Proschel, Margot; Mujtaba,
Tahmina
PATENT ASSIGNEE(S): University of Utah Research Foundation, USA
SOURCE: PCT Int. Appl., 78 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9850526	A1	19981112	WO 1998-US9630	19980507
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
US 6361996	B1	20020326	US 1997-852744	19970507
US 2002045251	A1	20020418	US 1998-73881	19980506
AU 9874811	A1	19981127	AU 1998-74811	19980507
EP 983344	A1	20000308	EP 1998-922212	19980507
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
PRIORITY APPLN. INFO.:			US 1997-852744 A 19970507	
			US 1998-73881 A 19980506	
			WO 1998-US9630 W 19980507	

AB **Multipotent neuroepithelial stem cells** and lineage-restricted oligodendrocyte-astrocyte precursor **cells** are described. The neuroepithelial **stem cells** are capable of self-renewal and of differentiation into neurons, astrocytes, and oligodendrocytes. The oligodendrocyte-astrocyte precursor **cells** are derived from neuroepithelial **stem cells**, are capable of self-renewal, and can differentiate into oligodendrocytes and astrocytes, but not neurons. Methods of generating, isolating, and culturing such neuroepithelial **stem cells** and oligodendrocyte-astrocyte precursor **cells** are also disclosed. A method of generating **neural crest stem cells** involves inducing neuroepithelial **stem cells** to differentiate in vitro into **neural crest stem cells**. Differentiation can be induced by replating the **cells** on laminin, withdrawing mitogens, or adding dorsalizing agents to the growth medium. Derivs. of the **peripheral** nervous system can be generated by inducing the **neural crest stem cells** to differentiate in vitro.

L2 ANSWER 13 OF 26 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 1998362104 EMBASE
TITLE: Cytokines in brain development and function.
AUTHOR: Mehler M.F.; Kessler J.A.
CORPORATE SOURCE: M.F. Mehler, Department of Neurology, Rose F. Kennedy Center, Res. Mental Retardation/Human Devmt., Bronx, NY 10451, United States
SOURCE: Advances in Protein Chemistry, (1998) 52/- (223-251).

COUNTRY:

United States

DOCUMENT TYPE:

Journal; General Review

FILE SEGMENT:

008 Neurology and Neurosurgery
 021 Developmental Biology and Teratology
 029 Clinical Biochemistry

LANGUAGE:

English

SUMMARY LANGUAGE:

English

AB Although studies of hemopoietins in **neural** development are still in their infancy, there is already significant evidence that these cytokines exhibit cellular and developmental response profiles. . . of hematopoietic and immune system development will have significant parallels to those active during neurogenesis. During early phases of CNS **stem** and **multipotent progenitor cell** development, there is already preliminary evidence that early- and intermediate-acting hemopoietins may exert complementary and cooperative actions on progenitor **cell** proliferation and survival in association with early-acting CNS cytokines (e.g., EGF, bFGF) (11, 12). Individual hemopoietins may also exert several. . . the hematopoietic literature has also shown that synergistic interactions between hemopoietin subgroups may be factor specific for a defined progenitor **cells** stage within a single lineage, and preliminary observations using cultured **neural** embryonic progenitor species have revealed similar patterns of developmental signaling (3, 25, 131, 132). Finally, experimental studies during early stages of hematopoiesis have shown that **cell** cycle regulation mediated by hemopoietin cooperativity may involve the interplay of **cell** cycle regulatory molecules and the levels of retinoblastoma protein phosphorylation (133). Previous studies using homozygous null mutations of the retinoblastoma. . . the particular importance of this protein for intermediate stages of CNS neurogenesis, and thus suggest that detailed analysis of selected **cell** cycle regulatory proteins will be crucial for defining the role of **cell** cycle transitions in **neural** lineage commitment and in early stages of cellular differentiation and viability (134-136). Although many apparent similarities exist between hematolymphopoiesis and. . . hallmark of neurogenesis is the development of electrical excitability and the establishment of synaptic and other functional connections between evolving **neural** lineage species. Preliminary evidence shows that the sequential expression of specific ligand-gated and ionic channels may be essential for the. . . and activity-dependent cellular morphogenesis may also each be orchestrated by distinct subsets of hemopoietins (3, 138). The analysis of these '**neural**-specific' cellular functions may also reveal new and interesting areas of commonality between neurogenesis and hematolymphopoiesis. In summary, these cumulative experimental observations have already demonstrated that four helix-loop bundle cytokines have a diverse spectrum of cellular actions during **neural** development that rival and often exceed those of the traditional neurotrophins and even the rapidly expanding TGF.β superfamily. These cytokines are involved in multiple stages of brain and **peripheral** nervous system lineage restriction, commitment, progenitor **cell** proliferation, survival, and graded stages of cellular differentiation.

L2 ANSWER 14 OF 26

MEDLINE

DUPLICATE 6

ACCESSION NUMBER: 1998376148 MEDLINE

DOCUMENT NUMBER: 98376148 PubMed ID: 9712303

TITLE: Induction and patterning of the neural crest, a stem cell-like precursor population.

AUTHOR: LaBonne C; Bronner-Fraser M

CORPORATE SOURCE: Division of Biology, Beckman Institute 139-74, California
 Institute of Technology, Pasadena 91125, USA..
 Clabonne@caltech.edu

SOURCE: JOURNAL OF NEUROBIOLOGY, (1998 Aug) 36 (2) 175-89. Ref:

JAM; 0213640. IS 0022-3034.
 PUB. COUNTRY: United States
 Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199811
 ENTRY DATE: Entered STN: 19990106
 Last Updated on STN: 19990106
 Entered Medline: 19981106

AB The neural crest is a **multipotent** precursor population which ultimately generates much of the **peripheral** nervous system, epidermal pigment **cells**, and a variety of mesectodermal derivatives. Individual **multipotent neural crest cells** are capable of some self-renewing divisions, and based upon this criteria can be considered **stem cells**. Considerable progress has been made in recent years toward understanding how this important population of progenitor **cells** is initially established in the early embryo, and how **cell-intrinsic** and non-**cell-intrinsic** factors mediate their subsequent lineage segregation and differentiation.

L2 ANSWER 15 OF 26 MEDLINE DUPLICATE 7
 ACCESSION NUMBER: 1998365440 MEDLINE
 DOCUMENT NUMBER: 98365440 PubMed ID: 9698451
 TITLE: A common neural progenitor for the CNS and PNS.
 AUTHOR: Mujtaba T; Mayer-Proschel M; Rao M S
 CORPORATE SOURCE: Department of Neurobiology and Anatomy, Department of
 Oncological Sciences, University of Utah Medical School,

50
 North Medical Drive, Salt Lake City, Utah, 84132, USA.
 CONTRACT NUMBER: NO1-HD-7-3263 (NICHD)
 SOURCE: DEVELOPMENTAL BIOLOGY, (1998 Aug 1) 200 (1) 1-15.
 Journal code: E7T; 0372762. ISSN: 0012-1606.
 PUB. COUNTRY: United States
 Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199808
 ENTRY DATE: Entered STN: 19980910
 Last Updated on STN: 19980910
 Entered Medline: 19980831

AB Cultured spinal cord neuroepithelial (NEP) **cells** can differentiate into neurons, oligodendrocytes and astrocytes and are morphologically and antigenically distinct from **neural crest stem cells** (NCSCs) that generate the PNS. NEP **cells**, however, can generate p75/nestin-immunoreactive **cells** that are morphologically and antigenically similar to previously characterized NCSCs. NEP-derived p75-immunoreactive **cells** differentiate into **peripheral** neurons, smooth muscle, and Schwann **cells** in mass and clonal culture. Clonal analysis of NEP **cells** demonstrates that a common NEP progenitor **cell** generated both CNS and PNS phenotypes. Differentiation into NCSCs was promoted by BMP-2/4 and differentiation did not require **cells** to divide, indicating that BMP played an instructive role in the differentiation process. Thus, individual NEP **cells** are **multipotent** and can differentiate into most major types of **cell** in the CNS and PNS and that PNS differentiation involves a transition from a NEP **stem** to another more limited, p75-immunoreactive, **neural crest stem cell**.
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L2 ANSWER 16 OF 26 MEDLINE DUPLICATE 8
 ACCESSION NUMBER: 97326937 MEDLINE

DOCUMENT NUMBER: 97326937 PubMed ID: 9183749
TITLE: Immortalization and controlled vitro differentiation of murine multipotent neural crest stem cells.
AUTHOR: Rao M S; Anderson D J
CORPORATE SOURCE: Division of Biology 216-76, Howard Hughes Medical Institute, California Institute of Technology, Pasadena 91125, USA.
CONTRACT NUMBER: NS-23476 (NINDS)
SOURCE: JOURNAL OF NEUROBIOLOGY, (1997 Jun 20) 32 (7) 722-46. Journal code: JAM; 0213640. ISSN: 0022-3034.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199707
ENTRY DATE: Entered STN: 19970805
Last Updated on STN: 19970805
Entered Medline: 19970721

AB To isolate mouse **neural crest stem cells**, we have generated a rat monoclonal antibody to murine neurotrophin receptor (p75). We have immortalized p75+ murine **neural crest cells** by expression of v-myc, and have isolated several clonal **cell** lines. These lines can be maintained in an undifferentiated state, or induced to differentiate by changing the culture conditions.

One of these **cell** lines, MONC-1, is capable of generating **peripheral** neurons, glia, and melanocytic **cells**. Importantly, most individual MONC-1 **cells** are **multipotent** when analyzed at clonal density. The neurons that differentiate under standard conditions have an autonomic-like phenotype, but under different conditions can express markers of other **peripheral** neuronal lineages. These lines therefore exhibit a similar differentiation potential as their normal counterparts. Furthermore, they can be genetically modified or generated from mice of different genetic backgrounds, providing a useful tool for molecular studies of **neural crest** development.

L2 ANSWER 17 OF 26 MEDLINE DUPLICATE 9
ACCESSION NUMBER: 96164424 MEDLINE
DOCUMENT NUMBER: 96164424 PubMed ID: 8590865
TITLE: Origin of the avian neural crest.
AUTHOR: Bronner-Fraser M
CORPORATE SOURCE: Developmental Biology Center, University of California at Irvine 92717, USA.
CONTRACT NUMBER: DE10066 (NIDCR)
HD-15527 (NICHD)
HD-25138 (NICHD)
SOURCE: STEM CELLS, (1995 Nov) 13 (6) 640-6. Ref: 22
Journal code: BN2; 9304532. ISSN: 1066-5099.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199604
ENTRY DATE: Entered STN: 19960418
Last Updated on STN: 20000303
Entered Medline: 19960403

AB **Neural crest cells** are derived from a population of **multipotent stem cells** within the **neural tube**. They emerge shortly after **neural tube** closure, migrate extensively in the embryo and localize in numerous sites, where they differentiate into neurons and glia of the **peripheral** nervous system, cartilage and bone of the face, melanocytes and various

other **cell** types. This review summarizes recent experiments from our laboratory delineating the origin and lineage of avian **neural crest cells**. **Neural crest cells** arise from the ectoderm, which also gives rise to presumptive epidermal, placodal and **neural tube cells**. Fate mapping experiments have demonstrated that the **neural crest** arises at the juncture between presumptive epidermis and the **neural plate**. Inductive interactions between these two early tissues can generate **neural crest cells**, suggesting that signals travel through the epidermis to generate **neural crest cells** prior to **neural tube** closure. Injection of lineage tracer into individual **cells** reveals that a single **neural fold** can form all ectodermal derivatives (i.e., epidermis, **neural tube**, **neural crest**). Even after **neural tube** closure, **neuroepithelial cells** have the capacity to form multiple **neural crest** and **neural tube** derivatives, including both dorsal and ventral phenotypes, suggesting that **neural tube** and **neural crest cells** share a common precursor. Further evidence that **neural crest** and **neural tube cells** are intimately related comes from experiments in which the cranial **neural folds** are ablated. The remaining **neural tube cells** have the capacity to regulate, at least for a limited time, to compensate for missing **neural crest cells**. These experiments suggest that the early **neuroepithelium** has no clear segregation with respect to the **neural tube** or **neural crest**. With time, dorsalizing and ventralizing signals may cause **neural tube cells** to acquire specific **cell fates**.

L2 ANSWER 18 OF 26 MEDLINE DUPLICATE 10
 ACCESSION NUMBER: 95315080 MEDLINE
 DOCUMENT NUMBER: 95315080 PubMed ID: 7794812
 TITLE: Human neuroblastoma I-type cells are malignant neural crest stem cells.
 AUTHOR: Ross R A; Spengler B A; Domenech C; Porubcin M; Rettig W J;
 Biedler J L
 CORPORATE SOURCE: Department of Biological Sciences, Fordham University, Bronx, New York 10458, USA.
 CONTRACT NUMBER: CA08748 (NCI)
 CA41520 (NCI)
 SOURCE: CELL GROWTH AND DIFFERENTIATION, (1995 Apr) 6 (4) 449-56.
 Journal code: AYH; 9100024. ISSN: 1044-9523.
 PUB. COUNTRY: United States
 Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199508
 ENTRY DATE: Entered STN: 19950817
 Last Updated on STN: 19950817
 Entered Medline: 19950803
 AB Human neuroblastoma I-type **cells** isolated from **cell** lines in vitro are morphologically intermediate between neuroblastic (N) **cells**, with properties of embryonic sympathoblasts, and substrate-adherent (S) **cells** having properties of embryonic Schwann/glial/melanocytic **cells** of the **neural crest**. I **cells** have biochemical features of both N and S **cells**. We propose that the I-type **cell** represents a malignant **neural crest stem cell**. The strongest evidence in support of this hypothesis is that: (a) I **cells** can generate progeny that have neuronal properties, i.e., are committed neuroblasts, or properties of nonneuronal, embryonic **neural crest**-derived

cells; and (b) I-type cells can generate **multipotent** type progeny, indicating their ability for self-renewal, a feature of **stem cells**. We report here that I-type cells, derived from four different human neuroblastoma cell lines and experimentally induced to differentiate, give rise to cells with distinct N or S cell phenotypes, indicative of I cell multipotentiality. Experiments with a large panel of I-type subclones, isolated from clonal I-type BE(2)-C cells and exposed to retinoic acid to induce neuronal differentiation or 5-bromo-2'-deoxyuridine to obtain S-type cells, demonstrated that differentiation occurs via induction and selection and not by selection of spontaneously arising variants. The differentiation phenotype was stable. We conclude that human neuroblastoma

I-type cells are **multipotent** embryonic precursor cells of the **peripheral** nervous system, capable of either neuronal or nonneuronal **neural crest cell** differentiation.

L2 ANSWER 19 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 ACCESSION NUMBER: 1996:38486 BIOSIS
 DOCUMENT NUMBER: PREV199698610621
 TITLE: The glial lineage of the peripheral nervous system.
 AUTHOR(S): Cameron-Curry, Patrizia
 CORPORATE SOURCE: Inst. d'Embryologie Cellulaire et Moleculaire, CNRS et Coll. de France UMRC 9924, 49 bis avenue de la Belle-Gabrielle, 94736 Nogent-sur-Marne Cedex France
 SOURCE: Comptes Rendus des Seances de la Societe de Biologie et de ses Filiales, (1995) Vol. 189, No. 2, pp. 253-261. ISSN: 0037-9026.
 DOCUMENT TYPE: Article
 LANGUAGE: French
 SUMMARY LANGUAGE: French; English

AB Glial cells are classified into 4 types. Two kinds of Schwann cells, myelinating and non-myelinating, are associated with the nerve fibres; satellite cells surround the neuronal soma in the ganglia. and enteric glial cells can be in contact with different neurons, that are incompletely ensheathed. A basal lamina is formed at the outer cell membrane of Schwann and satellite cells, but not inside the enteric plexuses. All the peripheral glial cells derive from the neural crest. The crest population of each axial level has both neuronal and glial potential, but it was unclear if common. . . . neurons are of placodal origin. To follow gliogenesis in the avian system we defined new molecular markers specific for glial cells by using the monoclonal antibody strategy. One of these markers is the Schwann cell Myelin Protein (SMP). It is a surface glycoprotein, belonging to the immunoglobulin superfamily. The SMP protein in vivo is restricted to oligodendrocytes and myelinating and non-myelinating Schwann cells, while satellite cells and enteric glia are SMP-negative. It is first expressed in the sciatic nerve of the quail embryo around E6, preceding myelination by 5 days. Thus in the PNS the appearance of SMP indicates an early stage of Schwann cell differentiation. The anti-SMP Mab was used to study the segregation of

the glial lineage in the clonal culture system developed in our laboratory.

We demonstrated that differently committed glial ancestors coexist in the cephalic neural crest during the migration stage. SMP-positive cells were found in 87% of the clones, showing that the gliogenic potential is high. The less abundant precursor is a highly multipotent one, the putative neural crest stem cell. The most abundant is the neurogenic precursor that can give rise to both neurons and glial cells: the segregation of the neurogenic lineage takes place mostly during the migration phase of the neural crest population. At the same time the first fully

committed glial precursors arise. The developing capacities of neural crest cells were also investigated at different time points of gangliogenesis at the trunk level. Among neural crest cells migrating in the sclerotomal part of the somites at E3, 69% generated clones containing SMP-positive cells. 33% of these clones were homogeneously SMP-positive. The neurogenic precursors, giving rise exclusively to neurons and glia, represented only 5.5%, demonstrating that the segregation of the two lineages is advanced at E3. When DRG cells from E6 and older embryos were cloned, no neurons were ever generated. SMP-positive cells were found in 37% of the DRG derived clones, and 46% of these were composed exclusively of glial cells. Thus determination of the glial lineage is more advanced at these stages. When satellite cells from E8 DRGs were cloned, 100% of the clones were composed almost exclusively of SMP-positive glial cells. The developmental potential of the cells that had migrated to the gut to form the enteric plexuses was also examined.

Clones

containing both neurons and glial cells were found up to E6 derived cultures, but the neuronogenic potential was lost by cells from older embryos, revealing divergence of the two lineages. In conclusion, determination of the glial lineage, and in particular segregation.

L2 ANSWER 20 OF 26

MEDLINE

DUPLICATE 11

ACCESSION NUMBER: 94327030 MEDLINE

DOCUMENT NUMBER: 94327030 PubMed ID: 8050669

TITLE: Stem cells and transcription factors in the development of the mammalian neural crest.

AUTHOR: Anderson D J

CORPORATE SOURCE: Division of Biology, Howard Hughes Medical Institute, California Institute of Technology, Pasadena 91125.

CONTRACT NUMBER: NS23476 (NINDS)

SOURCE: FASEB JOURNAL, (1994 Jul) 8 (10) 707-13. Ref: 64

Journal code: FAS; 8804484. ISSN: 0892-6638.

PUB. COUNTRY: United States

Journal; Article; (JOURNAL ARTICLE)

General Review; (REVIEW)

(REVIEW, TUTORIAL)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199409

ENTRY DATE: Entered STN: 19940914

Last Updated on STN: 19940914

Entered Medline: 19940906

AB The neural crest is a migratory population of multipotent embryonic cells that generates the neurons and glia of the peripheral nervous system, as well as a variety of non-neural mesectodermal and endocrine cell types. The study of neural crest cell and molecular biology provides a system to investigate how such multipotent cells choose their fates, and whether the repertoire of fates becomes progressively restricted with time. The study of mammalian neural crest development has lagged behind studies of avian crest development due to the relative inaccessibility of mammalian embryos. The development of reverse genetic methods in mice, however, has made the analysis of mammalian neural crest development both more attractive and more tractable. Rodent neural crest cells have been isolated and grown in clonogenic cultures, where they behave as multipotent stem cells. This system provides an assay for factors that influence the differentiation of these multipotent cells. Transcription factors provide valuable early markers for neural crest cells as well as molecular handles on the lineage segregation process. One such factor is Mash1, a homolog of the Drosophila proneural genes, achaete-scute. Mash1 marks autonomic progenitor cells and is essential for their development in vivo, as shown by gene knockout experiments.

L2 ANSWER 21 OF MEDLINE DUPLICATE 12
 ACCESSION NUMBER: 94236680 MEDLINE
 DOCUMENT NUMBER: 94236680 PubMed ID: 7910115
 TITLE: Glial growth factor restricts mammalian neural crest stem cells to a glial fate.
 AUTHOR: Shah N M; Marchionni M A; Isaacs I; Stroobant P; Anderson D
 J
 CORPORATE SOURCE: Division of Biology, California Institute of Technology, Pasadena 91125.
 SOURCE: CELL, (1994 May 6) 77 (3) 349-60.
 Journal code: CQ4; 0413066. ISSN: 0092-8674.
 PUB. COUNTRY: United States
 Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199406
 ENTRY DATE: Entered STN: 19940621
 Last Updated on STN: 20000303
 Entered Medline: 19940614

AB Growth factors and cytokines are thought to influence the development of uncommitted progenitor **cell** populations, but the issue of how these factors act on individual **cells** remains controversial. Such factors may act simply as selective mitogens or survival factors for **cells** that undergo lineage restrictions stochastically. Alternatively, they may instruct or bias **multipotent** **cells** to choose one lineage at the expense of others. Here we show that glial growth factor (GGF), previously defined as a Schwann **cell** mitogen, strongly suppresses neuronal differentiation of rat **neural crest stem cells** while promoting or allowing glial differentiation. Quantitative clonal analysis suggests that the action of GGF is likely to be instructive. . . selective. Taken together with the expression pattern of GGF, these data suggest a lateral signaling model for the diversification of **cell** types within developing **peripheral** ganglia.

L2 ANSWER 22 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 ACCESSION NUMBER: 1994:14630 BIOSIS
 DOCUMENT NUMBER: PREV199497027630
 TITLE: The ontogeny of the neural crest.
 AUTHOR(S): Dupin, Elisabeth (1); Deville, Françoise
 Sextier-Sainte-Claire; Nataf, Valerie; Le Douarin, Nicole M.
 CORPORATE SOURCE: (1) Institut d'Embryologie Cellulaire Moleculaire du CNRS, College de France, 49 bis, avenue de la Belle-Gabrielle, 94736 Nogent-sur-Marne Cedex France
 SOURCE: Comptes Rendus de l'Academie des Sciences Serie III Sciences de la Vie, (1993) Vol. 316, No. 9, pp. 1062-1081.
 ISSN: 0764-4469.
 DOCUMENT TYPE: Article
 LANGUAGE: French; English
 SUMMARY LANGUAGE: French; English

AB The **neural** crest is part of a larger embryonic structure, the **neural** folds, belonging to the **neural** primordium of the Vertebrate embryo. The **neural** fold is formed by the anterior and lateral ridges of the **neural** anlage, which fuse mediodorsally when the **neural** tube closes. Anteriorly, the epithelium of the **neural** fold does not convert into mesenchymal **cells** and yields Rathke's pouch, the olfactory organ and the epithelium of the mouth roof, of the upper lip and of. . . the frontal region of the head. From the level of the diencephalon (at the level of the epiphysis) downwards

the **neural** fold epithelium undergoes the epitheliomesenchymal transition and yields the **neural crest cells** which become later on highly diversified and form various structures and tissues

throughout the body. A large amount of data have shown that the environmental cues exerted on crest **cells** both during their migration and when they have reached their target sites are critical in determining their fate. In order to understand the mechanisms through which environmental factors influence crest **cell** differentiation, the developmental capacities of single **neural crest cells** were investigated at different time points of their ontogeny. Single **cell** cultures of crest **cells** have revealed that already at the migratory stage the **neural crest** is made up of **cells** at different states of determination. In particular, the analysis of clones obtained from single **cell** cultures of cephalic migratory crest **cells** has shown that, although many clonogenic **cells** are **multipotent** to varying degrees, others are committed to give rise to one single derivative. Totipotent progenitors able to generate representatives of virtually all the phenotypes (neuronal, glial, melanocytic and mesectodermal) encountered in cephalic **neural crest** derivatives were also found. We proposed that they represent **stem cells** analogous to those which in the hemopoietic system generate the various types of blood **cells**. The **neural crest stem cell** gives rise to diverse progenitors that become progressively restricted in their potentialities according to an essentially stochastic mechanism while dividing during and after completion of the migration process. Similar cloning experiments of crest **cells** that have already reached their target organs, i. e. sensory ganglia or enteric plexuses, showed that the phenotypic repertoire expressed by crest-derived **cells** decreases with increasing embryonic age. Efforts are made to elucidate the nature of the factors which influence either the survival and/or the differentiation of **neural crest cells** in the various types of environments in which they evolve. For example, several proteic growth factors like BDNF, NT3, bFGF were shown to influence the early **neural crest** derivatives of the **peripheral** nervous system (PNS) while they are in the process of gangliogenesis.

L2 ANSWER 23 OF 26 MEDLINE

ACCESSION NUMBER: 94060697 MEDLINE
DOCUMENT NUMBER: 94060697 PubMed ID: 7902150
TITLE: Segregation of cell lineage in the neural crest.
AUTHOR: Bronner-Fraser M
CORPORATE SOURCE: Developmental Biology Center, University of California, Irvine 92717.
SOURCE: CURRENT OPINION IN GENETICS AND DEVELOPMENT, (1993 Aug) 3 (4) 641-7. Ref: 46
JOURNAL code: BJC; 9111375. ISSN: 0959-437X.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199312
ENTRY DATE: Entered STN: 19940201
Last Updated on STN: 19950206
Entered Medline: 19931230

AB Following neurulation, **neural crest cells** emerge from the **neural** tube and undergo extensive migrations. At the onset of migration, **multipotent stem cells** exist within the **neural crest** population. Eventually, these assume one of a number of possible fates, ranging from neurons and glia of the **peripheral** nervous system to pigment **cells** and **cells** of the facial skeleton. **Neural crest cells**

follow migratory pathways and differentiate into derivatives that often are characteristic of their axial level of origin. Based on their stereotyped patterns of migration, limited intermixing and distinct homeobox-gene codes, some populations of **neural crest cells** may have a rostrocaudal regional identity imprinted prior to their emigration.

L2 ANSWER 24 OF 26 MEDLINE DUPLICATE 13
 ACCESSION NUMBER: 94057845 MEDLINE
 DOCUMENT NUMBER: 94057845 PubMed ID: 8239297
 TITLE: Neural stem cells for CNS transplantation.
 AUTHOR: Baetge E E
 CORPORATE SOURCE: CytoTherapeutics, Inc., Providence, Rhode Island 02906.
 SOURCE: ANNALS OF THE NEW YORK ACADEMY OF SCIENCES, (1993 Sep 24) 695 285-91. Ref: 27
 Journal code: 5NM; 7506858. ISSN: 0077-8923.
 PUB. COUNTRY: United States
 Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199312
 ENTRY DATE: Entered STN: 19940117
 Last Updated on STN: 20000303
 Entered Medline: 19931210

AB . . . with transplants in Parkinson's disease, but the process is heavily dependent on an unstable and problematic source of fetal tissue. **Neural stem cells** may become the tissue/cell source necessary for developing the therapeutic potential of neural transplantation. **Stem cells** are self-renewing, **multipotent** and could provide a well-characterized and clean source of transplantable material. A number of new in vitro approaches have led to the development of continuously propagated **stem cells** that are potential candidates for nervous system transplantation. These include oncogene-induced immortalization and growth-factor stimulation of naturally occurring central and **peripheral** nervous system **stem cells**. The nature of these **cells** and their suitability for transplantation into the CNS will be evaluated.

L2 ANSWER 25 OF 26 MEDLINE DUPLICATE 14
 ACCESSION NUMBER: 93374161 MEDLINE
 DOCUMENT NUMBER: 93374161 PubMed ID: 8365553
 TITLE: Origins of neural crest cell diversity.
 AUTHOR: Selleck M A; Scherson T Y; Bronner-Fraser M
 CORPORATE SOURCE: Developmental Biology Center, University of California at Irvine 92717.
 CONTRACT NUMBER: HD-25138 (NICHD)
 SOURCE: DEVELOPMENTAL BIOLOGY, (1993 Sep) 159 (1) 1-11. Ref: 60
 Journal code: E7T; 0372762. ISSN: 0012-1606.
 PUB. COUNTRY: United States
 Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)
 (REVIEW, TUTORIAL)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199310
 ENTRY DATE: Entered STN: 19931022
 Last Updated on STN: 19931022
 Entered Medline: 19931006

AB The **neural crest** is a population of migratory **cells**, arising from the ectoderm, that invades many sites within the embryo and differentiate into a variety of diverse **cell** types. Pigment **cells**, most **cells** of the **peripheral** nervous system, adrenal medullary **cells**, and some cranial cartilage are

derived from the **neural crest**. Despite a wealth of knowledge concerning their pathways of migration and vast array of derivatives, little is known about the formation of **neural crest cells** or their acquisition of positional identity. This review focuses on the origin of **neural crest cells** from the ectoderm and the generation of differences in **neural crest cell fates** along the rostrocaudal axis. In addition, we consider the role of temporal restriction in the developmental potential of premigratory **neural crest cells**. While evidence for the existence of **multipotent stem cells** is strong, some experiments also suggest that there may be heterogeneity among **neural crest cell precursors**, perhaps due to differences in origin, that might explain commitment events occurring early in **neural crest development**.

L2 ANSWER 26 OF 26 MEDLINE DUPLICATE 15
 ACCESSION NUMBER: 92120107 MEDLINE
 DOCUMENT NUMBER: 92120107 PubMed ID: 1769335
 TITLE: Common precursors for neural and mesectodermal derivatives in the cephalic neural crest.
 AUTHOR: Baroffio A; Dupin E; Le Douarin N M
 CORPORATE SOURCE: Institut d'Embryologie cellulaire et moléculaire, CNRS, Nogent-sur-Marne, France.
 SOURCE: DEVELOPMENT, (1991 May) 112 (1) 301-5.
 Journal code: ECW; 8701744. ISSN: 0950-1991.
 PUB. COUNTRY: ENGLAND: United Kingdom
 Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199202
 ENTRY DATE: Entered STN: 19920315
 Last Updated on STN: 19920315
 Entered Medline: 19920225

AB The cephalic **neural crest (NC)** of vertebrate embryos yields a variety of **cell types** belonging to the neuronal, glial, monocyte and mesectodermal lineages. Using clonal cultures of quail migrating cephalic **NC cells**, we demonstrated that neurons and glial **cells** of the peripheral nervous system can originate from the same progenitors as cartilage, one of the mesectodermal derivatives of the NC. Moreover, we obtained evidence that the migrating cephalic NC contains a few highly **multipotent** precursors that are common to neurons, glia, cartilage and pigment **cells** and which we interpret as representative of a **stem cell** population. In contrast, other NC **cells**, although provided with identical culture conditions, give rise to clones composed of only one or some of these **cell types**. These **cells** thus appear restricted in their developmental potentialities compared to **multipotent cells**. It is therefore proposed that, in vivo, the active proliferation of pluripotent NC **cells** during the migration process generates distinct subpopulations of **cells** that become progressively committed to different developmental fates.

=> s tongue (p) explant (p) stem (p) cell

3 F ES SEARCHED...

L3 0 TONGUE (P) EXPLANT (P) STEM (P) CELL

=> s tongue (p) explant

L4 93 TONGUE (P) EXPLANT

=> s oct4 (p) epithel4 (p) stem (p) cell

4 IS NOT A RECOGNIZED COMMAND

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=> s o lfact? (p) epithel? (p) stem (p) cell

3 FILES SEARCHED...

L5 207 OLFACT? (P) EPITHEL? (P) STEM (P) CELL

=> s o lfact? (p) epithel? (p) stem (p) cell (p) neuron?

3 FILES SEARCHED...

L6 164 OLFACT? (P) EPITHEL? (P) STEM (P) CELL (P) NEURON?

=> s o lfact? (s) epithel? (s) stem (s) cell (s) neuron?

L7 137 OLFACT? (S) EPITHEL? (S) STEM (S) CELL (S) NEURON?

=> s o lfact? (s) epithel? (s) stem (s) cell (s) neuron? (s) multipotent

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=> s o lfact? (s) epithel? (s) stem (s) cell (s) neuron? (s) multipotent

L8 3 OLFACT? (S) EPITHEL? (S) STEM (S) CELL (S) NEURON? (S)

MULTIPOTENT

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=> dup rem l8

PROCESSING COMPLETED FOR L8

L9 2 DUP REM L8 (1 DUPLICATE REMOVED)

=> d l total ibib kwic

L9 ANSWER 1 OF 2 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

ACCESSION NUMBER: 2001:261476 BIOSIS

DOCUMENT NUMBER: PREV200100261476

TITLE: Adult human olfactory-derived stem cells: The effect of substrata on proliferation and lineage restriction.

AUTHOR(s): Patton, Chad (1); Hatcher, Linda M. (1); Lu, C. L. (1); Klueber, Kathleen M. (1); Roisen, Fred J. (1)

CORPORATE SOURCE: (1) University of Louisville, 500 S. Preston St., Louisville, KY, 40292 USA

SOURCE: FASEB Journal, (March 8, 2001) Vol. 15, No. 5, pp. A1073. print.

American Societies for Experimental Biology on Experimental Biology
Meeting Info.: Annual Meeting of the Federation of

2001 Orlando, Florida, USA March 31-April 04, 2001
ISSN: 0892-6638.

DOCUMENT TYPE: Conference

LANGUAGE: English

SUMMARY LANGUAGE: English

AB Previous studies (Roisen et al, Brain Research in press) have reported that neurosphere-producing cells can be obtained from 6 to 12h post-mortem adult human olfactory epithelium. These multipotent cells give rise to neuronal, glial, and epithelial populations as demonstrated by immunolocalization of lineage-specific markers. The initial cultures have been maintained through more than 100 passages; representative passages have been characterized for proliferation, morphological phenotype, and differentiation. Preliminary data suggests that laminin and an entactin-collagen-laminin combination

increase the number of processes per cell and reduce the number of round phase bright cells within 48h compared to cells maintained on fibronectin or pre-washed glass. Immunolocalization reveals cells positive for beta-tubulin III, a neuron-specific marker. A smaller population of cells was positive for keratin and may reflect an epithelial phenotype. A very limited number of cells were found positive for both beta-tubulin III and keratin, suggesting a common precursor. Comparison studies between cells from passage number 87 and early passage number 12 demonstrate similar responses on all substrata. An assay of mitochondrial dehydrogenase activity further demonstrates the equivalency of cells from these passages. The ornithine decarboxylase activity of early and late passages has also been assayed to provide an index of metabolic activity. The effects of substrata on cytoskeletal development, protein synthesis of olfactory-derived stem cells are being evaluated with electron microscopy and western blot analysis. Future studies will determine the possible utility of these cells for transplantation.

L9 A JER 2 OF 2 MEDLINE DUPLICATE 1
 ACCESS NUMBER: 94356698 MEDLINE
 DOCUMENT NUMBER: 94356698 PubMed ID: 8076206
 TITLE: The ontogeny of the neural crest.
 AUTHOR: Dupin E; Sextier-Sainte-Claire Deville F; Nataf V; Le Douarin N M
 CORPORATE SOURCE: Institut d'Embryologie Cellulaire et Moleculaire du C.N.R.S., College de France, Nogent-sur-Marne, France.
 SOURCE: COMPTES RENDUS DE L ACADEMIE DES SCIENCES. SERIE III, SCIENCES DE LA VIE, (1993 Sep) 316 (9) 1062-81.
 PUBLICATION COUNTRY: France
 JOURNAL: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English; French
 FILE STATUS: Priority Journals
 ENTRY MONTH: 199410
 ENTRY DATE: Entered STN: 19941013
 Last Updated on STN: 19941013
 Entered Medline: 19941006

ABSTRACT: ... by the anterior and lateral ridges of the neural anlage, which differentiate mediodorsally when the neural tube closes. Anteriorly, the epithelium of the neural fold does not convert into mesenchymal cells and yields Rathke's pouch, the olfactory organ and the epithelium of the mouth roof, of the upper lip and of the frontal region of the head. From the level of the diencephalon (at the level of the epiphysis) downwards the neural fold epithelium undergoes the epitheliomesenchymal transition and yields the neural crest cells which become later on highly diversified and form various structures and tissues throughout the body. A large amount of data have shown that the environmental cues exerted on crest cells both during their migration and when they have reached their target sites are critical in determining their fate. In order to understand the mechanisms through which environmental factors influence crest cell differentiation, the developmental capacities of single neural crest cells were investigated at different time points of their ontogeny. Single cell cultures of crest cells have revealed that already at the migratory stage the neural crest is made up of cells at different states of determination. In particular, the analysis of clones obtained from single cell cultures of cranial migratory crest cells has shown that, although many clonogenic cells are multipotent to varying degrees, precursors are committed to give rise to one single derivative. Totipotent precursors are able to generate representatives of virtually all the cell types (neuronal, glial, melanocytic and mesectodermal)

encountered in cephalic neural crest derivatives were also found. We
 proposed that they represent stem cells analogous to
 those which in the hemopoietic system generate the various types of blood
 cells. The neural crest stem cell gives rise
 to diverse progenitors that become progressively restricted in their
 potentialities according to an essentially stochastic mechanism while
 migrating during and after completion of the migration process. Similar
 cloning experiments of crest cells that have already reached
 their target organs, i. e. sensory ganglia or enteric plexuses, showed
 that the phenotypic repertoire expressed by crest-derived cells
 decreases with increasing embryonic age. Efforts are made to elucidate
 the
 nature of the factors which influence either the survival and/or the
 differentiation of neural crest cells in the various types of
 environments in which they evolve. (ABSTRACT TRUNCATED AT 400 WORDS)

=> d h

(FILE 'HOME' ENTERED AT 10:00:34 ON 30 APR 2002)

FILE 'MEDLINE, BIOSIS, EMBASE, CAPLUS' ENTERED AT 10:00:52 ON 30 APR 2002
 L1 60 S MULTIPOTENT (P) STEM (P) CELL (P) PERIPHERAL (P) NEURAL
 L2 26 DUP REM L1 (34 DUPLICATES REMOVED)
 L3 0 S TONGUE (P) EXPLANT (P) STEM (P) CELL
 L4 93 S TONGUE (P) EXPLANT
 L5 207 S OLFACT? (P) EPITHEL? (P) STEM (P) CELL
 L6 164 S OLFACT? (P) EPITHEL? (P) STEM (P) CELL (P) NEURON?
 L7 137 S OLFACT? (S) EPITHEL? (S) STEM (S) CELL (S) NEURON?
 L8 3 S OLFACT? (S) EPITHEL? (S) STEM (S) CELL (S) NEURON? (S)
 MULTIP
 L9 2 DUP REM L8 (1 DUPLICATE REMOVED)

=> dup em l7

PROCESSING COMPLETED FOR L7

L10 64 DUP REM L7 (73 DUPLICATES REMOVED)

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L10 ANSWER 1 OF 64 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
 ACCESSION NUMBER: 2002071866 EMBASE
 TITLE: [Nervous primary cells in the adult: Recent progress and
 contribution from the olfactory system].
 LES CELLULES-SOUCHES NERVEUSES CHEZ L'ADULTE: PROGRES
 RECENTS ET APPORTS DU SYSTEME OLFACTIF.
 AUTHOR: Bauer S.; Patterson P.H.; Moyse E.
 CORPORATE SOURCE: S. Bauer, Neurosciences et Systemes Sensoriels, CNRS-UMR
 5020; 43, Bld du 11 Novembre 1918, 69622 Villeurbanne
 Cedex, France
 SOURCE: Revue de Geriatrie, (2002) 27/1 (33-44).
 Refs: 61
 ISSN: 0397-7927 CODEN: RGERDX
 COUNTRY: France
 DOCUMENT TYPE: Journal; General Review
 FILE SECTORS: 008 Neurology and Neurosurgery
 011 Otorhinolaryngology
 020 Gerontology and Geriatrics
 029 Clinical Biochemistry
 LANGUAGE: French
 SUMMARY LANGUAGE: English; French
 ABSTRACT: Neural stem cells that have been demonstrated, since
 1982, ensure in vivo localized and adjustable neurogenesis in the brain
 of

adult mammals. This . . . demands preliminary answers to several biological issues. The most important one concerns the mechanisms controlling proliferation rate and commitment to neuronal lineage of neural stem cells. Olfactory system of adult rodents provide an excellent model-system to address this basic question. This sensory pathway harbors indeed the two neurogenetic systems that are the most active in adult mammals: epithelium of olfactory organ (OE) from intrinsic neuronal progenitors, olfactory bulb from neural stem cells of telencephalic ventricles. We used OE to analyze proliferation control by intrinsic mitogenic signals. Among all factors acting upon cell cultures, only the cytokine LIF (Leukemia Inhibitory Factor) was significantly induced in vivo preceding LIF-induced stimulation of progenitors, in the . . .

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L Number	Hits	Search Text	DB	Time stamp
1	99	stem same cells same multipotent same neural	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/04/30 09:49
2	12	stem same cells same multipotent same neural same epithelial	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/04/30 09:50
3	148	stem same cells same neural same epithelial	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/04/30 09:58
5	15	mammalian same multipotent same neural same stem same cell same crest	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/04/30 09:56
4	45	mammalian same multipotent same neural same stem same cell	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/04/30 09:56
6	3	5411883.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/04/30 09:59
7	3	5753506.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/04/30 09:59